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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/137,393	08/20/1998	PIJUSH K. DEWANJEE	DSCK-525-C3	2824
7590 11/15/2005			EXAMINER	
Mark D. Lorusso Lorusso & Loud 15 Rye Street, Suite 312 Portsmouth, NH 03801			SERGENT, RABON A	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/137,393

Applicant(s)

DEWANJEE ET AL.

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-33, 36-41 and 43-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-33, 36-41, and 43-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claims 30-33, 36-39, 53, and 54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Firstly, support has not been provided for the amendment within line 5 of claim 30. The language, "a golf ball mold with dimples", is not supported by the specification. The examiner has not found support for the mold having such a surface. Furthermore, since dimples are defined as depressions and since it is the mold that has the dimples, applicants' claim language has the effect of requiring the finished golf balls to have "bumps", as opposed to dimples. Applicants have not provided support for such a surface feature.

Secondly, applicants have failed to provide support for the claimed stoichiometry of prepolymer to curative within the last three lines of claim 30. Applicants have provided no indication how the specification, as filed, provides support for the claim amendment.

Thirdly, applicants have failed to provide support for the amendment to claim 37. The language, "about the same value", is neither comparable nor supportive of "not less than".

Fourthly, the specification provides no support for the amendment to claim 53. The specification merely recites, "polyurethane-based liquid"; it is not seen how this language is equivalent to or supportive of "a liquid that reacts into a polyurethane".

Lastly, support has not been provided for stating that the cover has a flexural modulus that falls within the range of 15,000 PSI to about 30,000 PSI. Firstly, support is lacking for the use of "about". Applicants' response has not fully addressed this issue, since "about 30,000"

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remains within the claim. Secondly, the language at page 30 of the specification only provides support for the exemplified composition having a flexural modulus of 16,650 psi. It does not provide support for all compositions encompassed by the claim having flexural modulus values that fall anywhere within the claimed range.

2. Claims 30, 32, 33, 36-39, 43, 48-50, and 53-58 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of golf ball covers using toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, isophorone diisocyanate, or mixtures thereof, does not reasonably provide enablement for the production of golf ball covers using virtually any polyisocyanate, including any benzene ring containing polyisocyanate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Aside from the aforementioned polyisocyanates, applicants have provided no guidance for the selection of other suitable polyisocyanates that will yield cast polyurethanes having suitable physical properties for use as golf ball covers, without having to resort to undue experimentation. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Applicants' argument that the enablement requirement is met, because at least one example is provided in no way addresses the issue raised by the examiner. Applicants' reliance on examples, limited to TDI, in no way address the issue that adequate enablement has not been provided for the use of other polyisocyanates. Applicants' disclosed polyurethane and the properties possessed by the polyurethane rely upon a specifically disclosed reaction system containing specifically disclosed polyisocyanates, a specifically disclosed polyol, and a specifically disclosed curative blend. Applicants provide no guidance that would permit the skilled artisan to substitute reactants for

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the specifically disclosed ones, yet preserve the required properties of the resulting polyurethane that would permit the production of viable golf ball covers.

3. Claims 30-33, 36-39, 44-46, and 48-58 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of golf ball covers using a mixture of diethyl-2,4-toluenediamine and dimethylthio-2,4-toluenediamine, as curing agents, does not reasonably provide enablement for the production of golf ball covers using virtually any diamine curing agent, including blends of differently reacting diamines. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification is devoid of guidance that would enable one to select suitable diamine curing agents, other than the disclosed blends of diethyl-2,4-toluenediamine and dimethylthio-2,4-toluenediamine, that will yield suitable golf ball covers, having viable processing characteristics and suitable golf ball properties, without having to resort to undue experimentation. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). The only practical guidance provided by applicants stems from page 11 of the specification, wherein applicants state that the curing agents of the present invention are substantially Ethacure 300 and Ethacure 100. Applicants' reliance on examples, limited to blends of Ethacure 300 and Ethacure 100, in no way address the issue that adequate enablement has not been provided for the use of other curatives. Applicants' disclosed polyurethane and the properties possessed by the polyurethane rely upon a specifically disclosed reaction system containing specifically disclosed polyisocyanates, a specifically disclosed polyol, and a specifically disclosed curative blend. Applicants provide no guidance that would permit the skilled artisan to substitute reactants for the specifically disclosed ones, yet preserve

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the required properties of the resulting polyurethane that would permit the production of viable golf ball covers.

4. Claims 30, 31, 33, 36-40, 43-51, and 53-58 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of golf ball covers using polyoxytetramethylene polyol, does not reasonably provide enablement for the production of golf ball covers using virtually any polyol. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Applicants have failed to provide adequate teaching to permit one of ordinary skill in the art to produce viable golf ball covers using polyols other than the aforementioned polyoxytetramethylene polyol, without having to resort to undue experimentation. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). The only guidance that applicants provide concerning the use of other polyols is a statement at page 14 that states that “unlike urethane elastomers made with other ether polyols, e.g., polypropylene ether glycol, urethane elastomers made with PTMEG exhibit superior dynamic properties such as coefficient of restitution and Bashore rebound”. Applicants further state that the polyol used in accordance with the present invention corresponds to a polyoxytetramethylene polyol. These statements in no way provide guidance for the use of other polyols. Applicants’ reliance on examples, limited to PTMEG, in no way address the issue that adequate enablement has not been provided for the use of other polyols. Applicants’ disclosed polyurethane and the properties possessed by the polyurethane rely upon a specifically disclosed reaction system containing specifically disclosed polyisocyanates, a specifically disclosed polyol, and a specifically disclosed curative blend. Applicants provide no guidance that would permit the skilled artisan to

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substitute reactants for the specifically disclosed ones, yet preserve the required properties of the resulting polyurethane that would permit the production of viable golf ball covers.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 30-33, 36-41, 43-52, and 54-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. ('852) or GB 2301291, each in view of Wu ('673) and Isaac ('568) and Presswood ('298).

The primary references disclose the production of thread wound-solid center golf balls, wherein the winding and center are comprised of components which are equivalent to those claimed by applicants. See columns 2-5 and tables within Kato et al. See pages 7-9 and examples within GB 2301291.

7. While the primary references are largely silent regarding the use of polyurethane covers, the use of such covers utilizing applicants' claimed prepolymer and blends of curing agents

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having different reactivities was known at the time of invention. Wu discloses the use of prepolymers based on diisocyanates and polytetramethylene ether glycol and a slow reacting polyamine, such as 3,5-dimethylthio toluene diamine. See column 2. Isaac discloses the production of golf balls having polyurethane covers, wherein the polymerization cycle is interrupted through the use of blends of curing agents having different reactivities, so as to permit a center to be introduced into a semi-cured golf ball cover half which is then mated with the other half and cured. See abstract and columns 2 and 3. Furthermore, the claimed hardness values and flexural modulus are considered to be inherent features of the polyurethane covers of these references, since it is logical to conclude that viable covers would have to possess comparable ranges of these properties in order to perform acceptably.

8. Though Isaac fails to disclose applicants' blend of fast and slow curing reacting diamines, the use of blends of diethyl toluene diamine with 3,5-dimethylthio toluene diamine to produce polyurethane molding compositions having controlled reaction profiles and improved properties was known at the time of invention. This position is supported by the teachings of Presswood at columns 2-4. Presswood further discloses the relative reactivities of the specified chain extenders.

9. Therefore, since it was known to employ blends of curing agents having different reactivities for the production of polyurethane golf ball covers and since it was known to employ diamines of the nature claimed by applicants to cure moldable prepolymers analogous to those claimed, it would have been obvious to one of ordinary skill in the art to utilize the curing agent blend of Presswood with the prepolymer of Wu in accordance with the teachings of Isaac, so as

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to obtain a golf ball cover composition suitable for use with the wound cores of the primary references.

10. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. ('852) or GB 2301291, each in view of Wu ('673) and Isaac ('568) and Presswood ('298) as applied to claims 30-33, 36-41, 43-52, and 54-58 above, and further in view of Ford et al. ('280).

As aforementioned, the combined teachings of Kato et al. or GB 2301291 and Wu, Isaac, and Presswood are considered to render applicants' golf ball cover obvious; however, these references are silent with respect to the step of precoating the core with polyurethane prior to introducing the core into the mold. Still, Ford et al. disclose at column 2, lines 59-70 the precoating of golf ball cores with polyurethane prepolymer to assist in locating the cores within the mold. Therefore, it would have been obvious to one of ordinary skill in the art to precoat the core of the primary references for the same reason.

11. Applicants' arguments to the prior art rejections have been considered; however, they are insufficient to remove the rejections. Applicants have argued that Wu and Isaac fail to disclose polyurethane processes through casting. In response, applicants' argument is deficient for the following two reasons. Firstly, the position is taken that both Wu and Isaac disclose processes wherein the polyurethane covered golf balls are produced in molds, wherein golf ball cores are placed within molds containing uncured polyurethane cover compositions and cured. These disclosures are therefore considered to be analogous to and, at the least, suggestive of applicants' claimed casting process limitations. Secondly and more importantly, applicants' claims are drawn to products, and applicants have not demonstrated that the process limitations yield a product having a patentable distinction; therefore, the process limitations are immaterial to the

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issues at hand. Applicants have argued that Presswood fails to disclose a diamine curative blend. In response, the crux of Presswood's invention resides with the use of such a curative blend. Accordingly, applicants' argument is not understood. Furthermore, applicants' argument is not commensurate in scope with all of applicants' claims. For example, claim 59 does not even require a curative blend.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
November 13, 2005